

# Using the CNDDB layer in the BIOS “CNDDB / Spotted Owl Viewer”

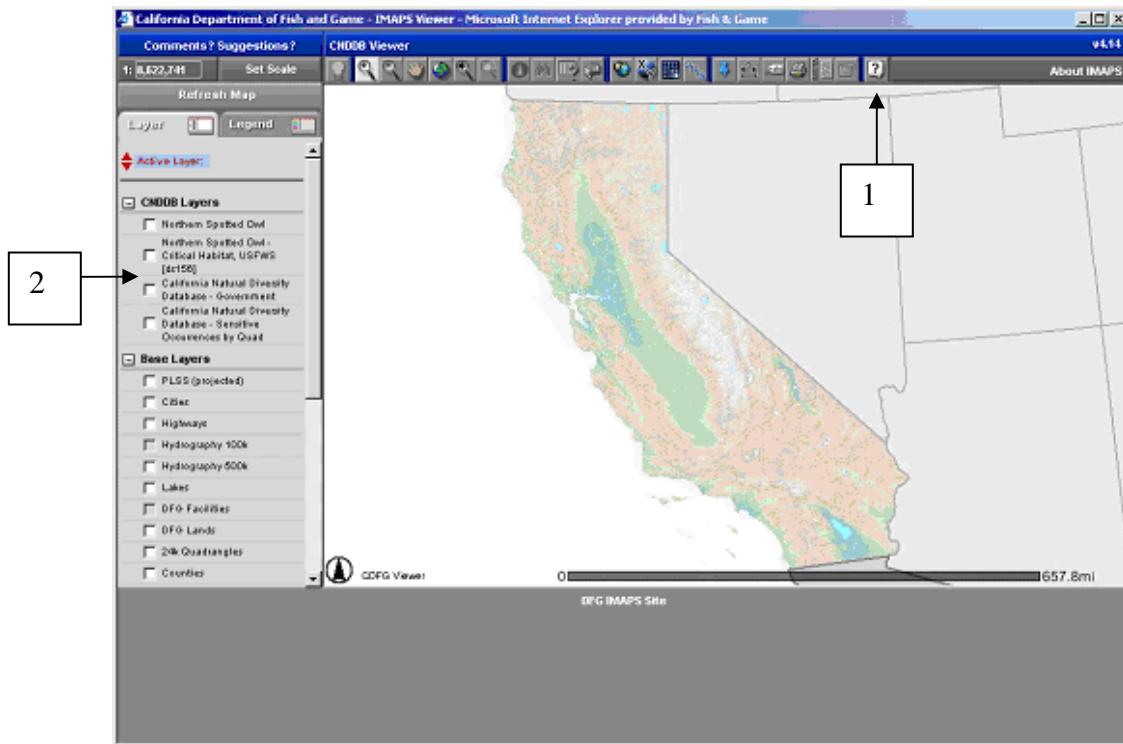
(March, 2006)

The CNDDB / Spotted Owl Viewer is another option for accessing the CNDDB information available in RareFind. With the viewer you can view data spatially, create labels, and print maps without the need to have GIS software installed on your computer. More complex spatial analysis and data manipulation will still require the use of a full GIS in conjunction with RareFind.

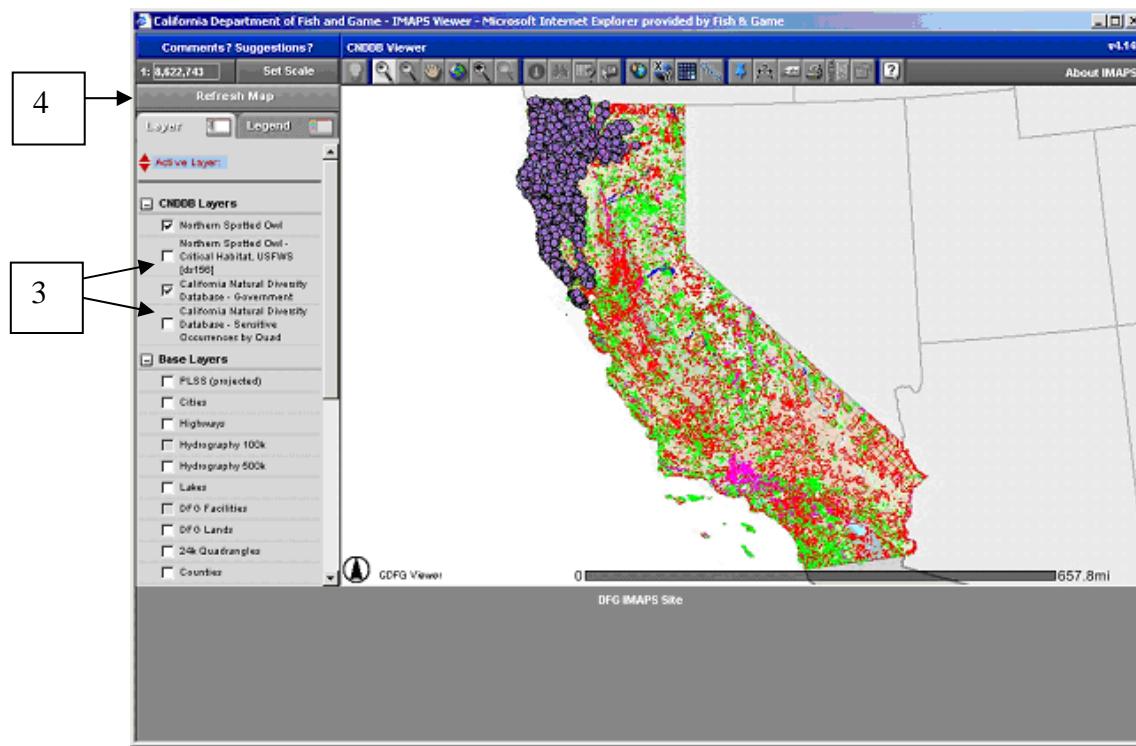
The viewer also allows the user to use the spotted owl data layer in conjunction with the CNDDB data layer.

More information about the tools on the tool bar is available with the “Help” tool (1).

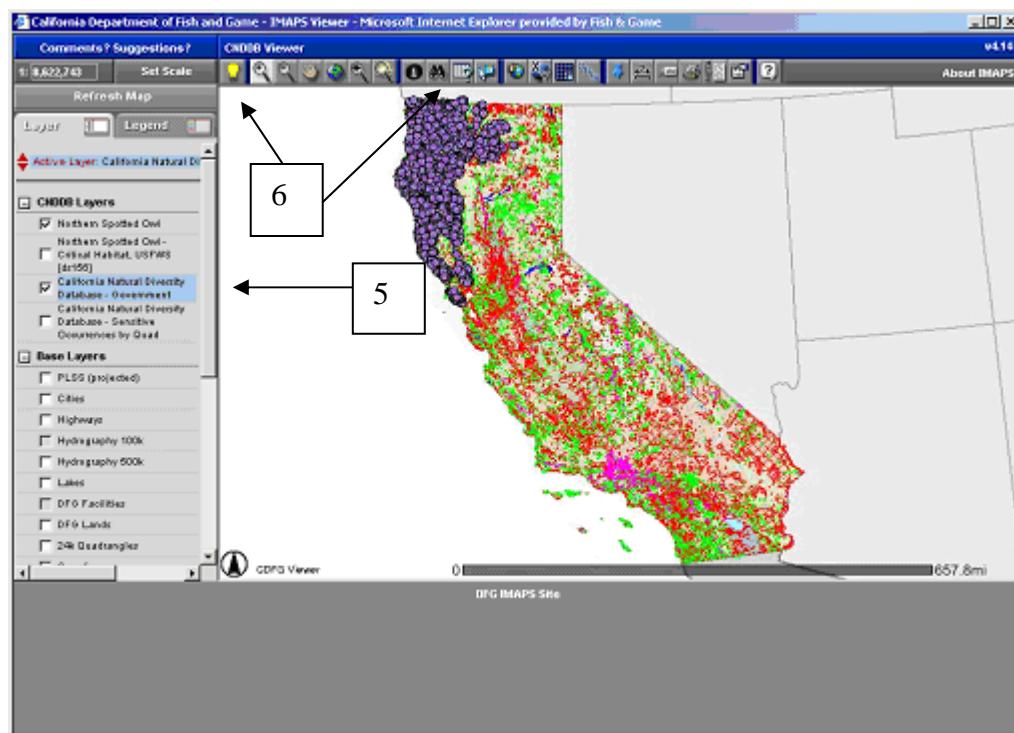
With the CNDDB / Spotted owl viewer, all the needed layers are ready to be used (2).



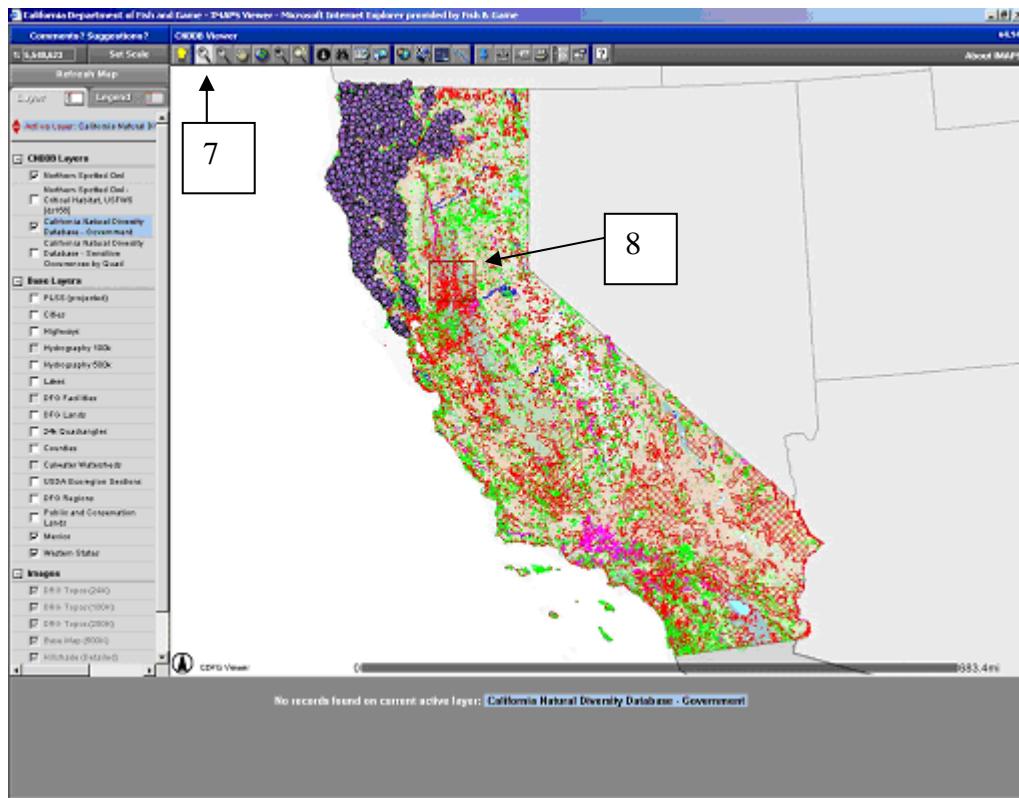
**Displaying layers:** Click the checkbox of each layer that you want displayed (3), then click on “Refresh Map” (4) to draw.



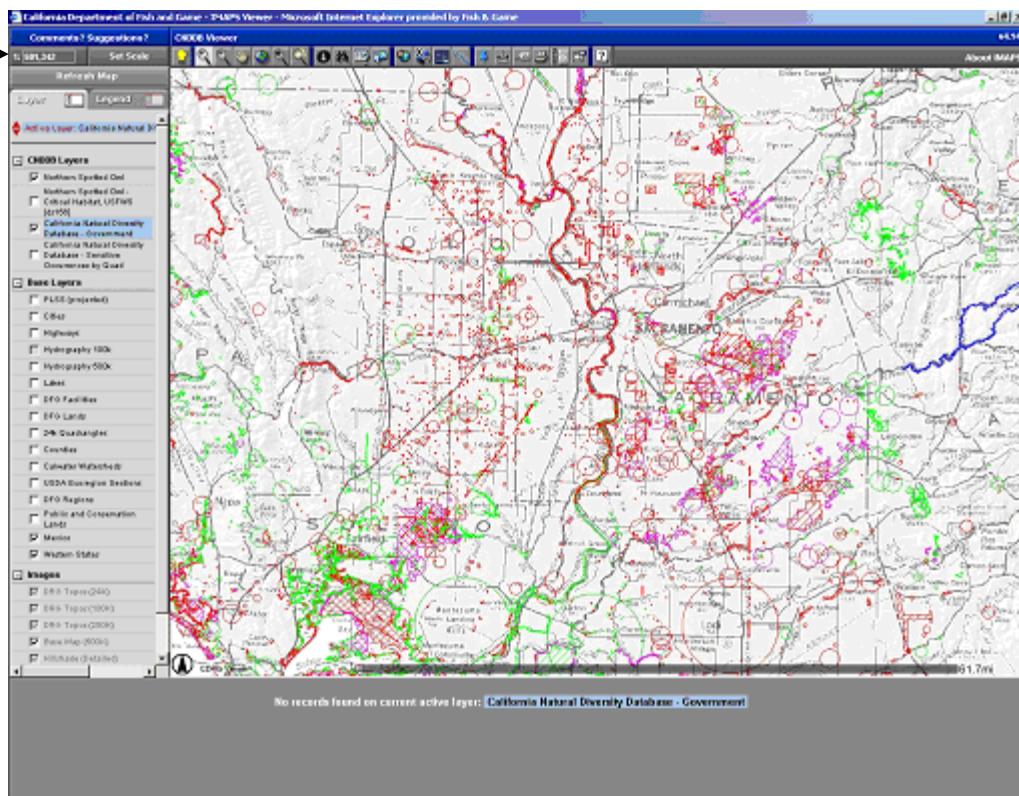
**Making a layer active:** Click on the name of a layer to make it the “Active Layer” (5). The active layer will become highlighted in blue. Only one layer at a time can be active. Once you’ve selected an Active Layer, additional tools on the tool bar may become available (6).



**Zooming:** Click the zoom-in tool (7), then draw a box around your area of interest (hold down the left mouse button to anchor one corner of the box, move the mouse diagonally to enlarge the box, and release the mouse button to complete the box) (8).

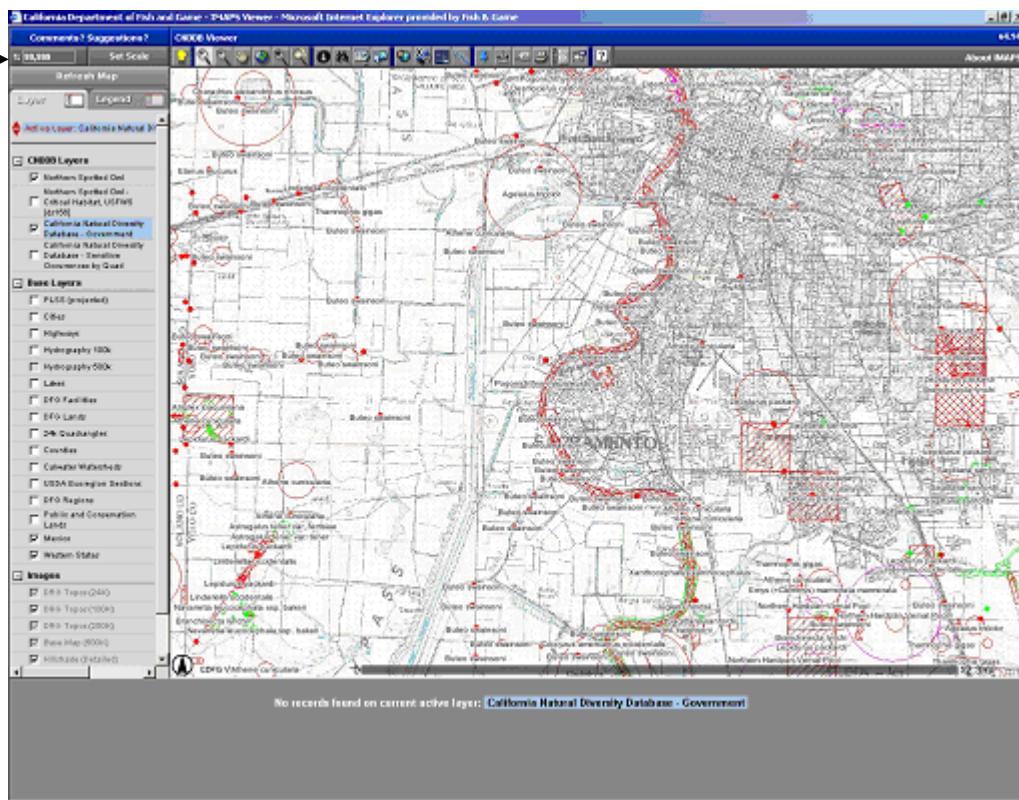


The map will redraw to the area of the box. As you zoom in more topographic features become visible. The current map scale is shown in the upper left hand corner (9).



**Setting the scale:** You can set the scale by typing it in and then clicking “Set Scale” (10). When the scale is below 1:100,000 the scientific name of the element mapped is shown. The scale here is 1:99,999; the smallest scale at which the scientific name is visible.

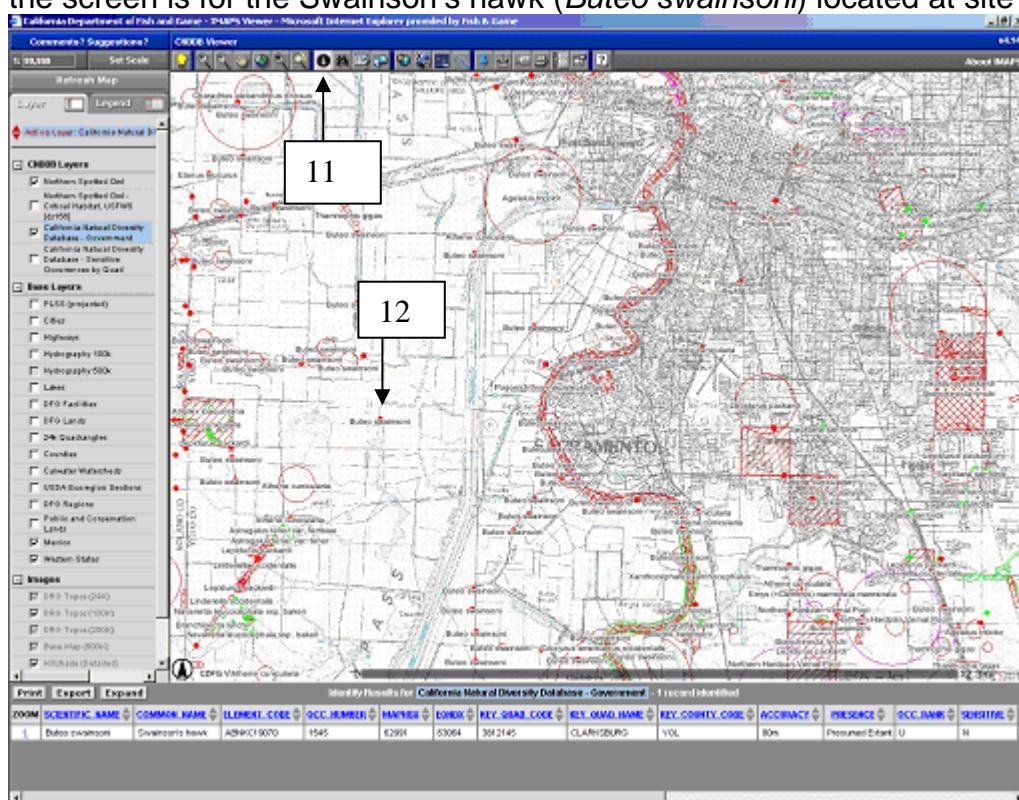
10



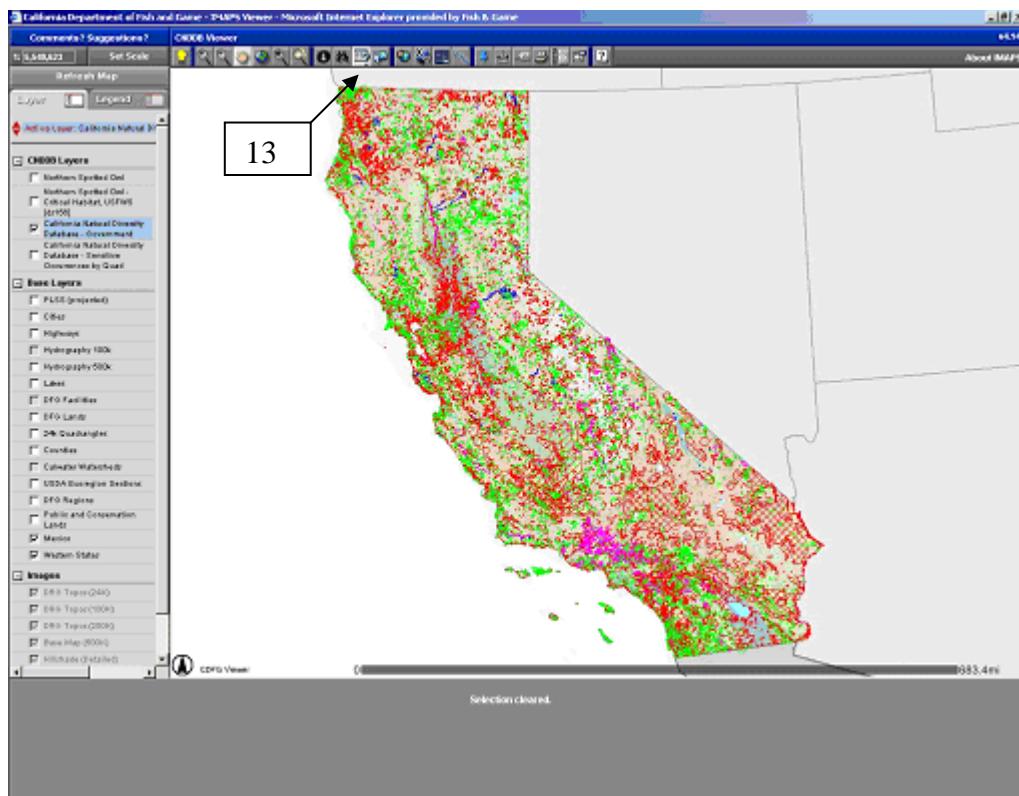
**Identifying things in the active layer:** Use the “Identify” tool (11) to get additional information about a single occurrence by activating (clicking) the tool and then clicking the feature of interest (layer must be Active Layer). In this case, the information at the bottom of the screen is for the Swainson’s hawk (*Buteo swainsoni*) located at site 12.

11

12



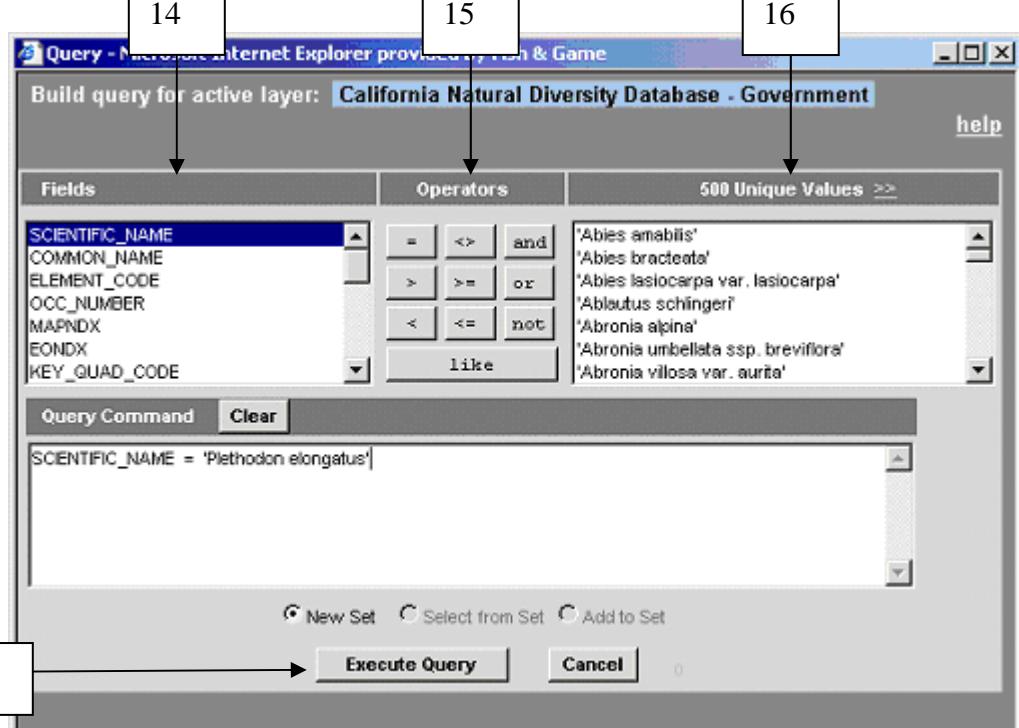
**Selecting features by attribute:** You can also select features based upon attributes using the “Query” tool (13). When you click this tool the following window opens (below):



14

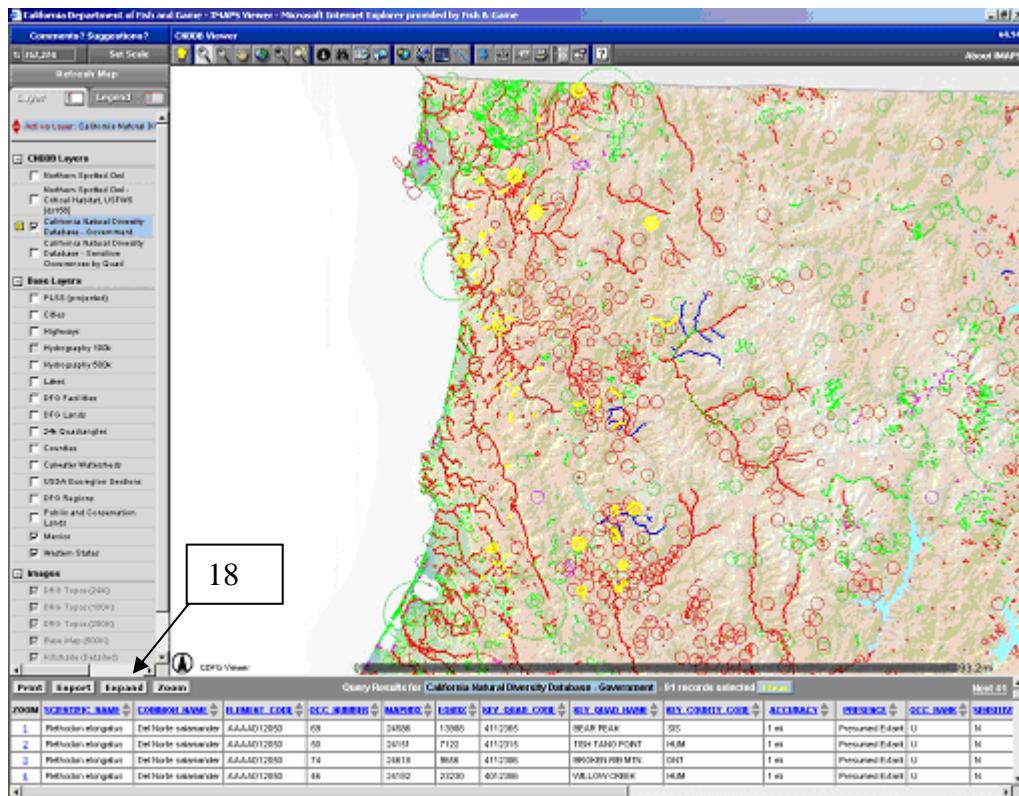
15

16



Double click on one of the options in “Fields” (14). Choose (single click) an operator (15), and scroll to, and double click or type in, a value (16). Note: typed values must exactly match the listed values. In this case I selected *Plethodon elongatus*. Finally, click the “Execute Query” button (17).

**Selected Features:** All of the selected features are highlighted in yellow. Note: the viewer will not automatically zoom to the area of the features selected. A limited amount of text data on each occurrence in displayed at the bottom of the screen. For easier viewing of the text data, the “Expand” button (18) will open a new, larger window with all of the text information shown at the bottom of the screen.

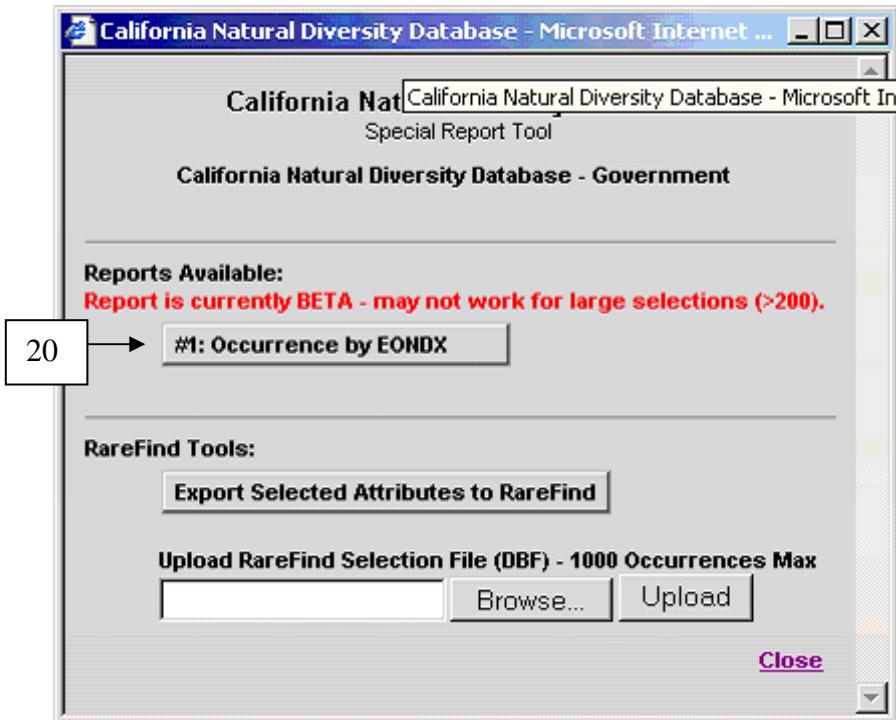


**Selecting features graphically:** If you want information on a group of occurrences, you can use the “Graphically select features from the active layer” tool (19) to draw a box around the occurrences, (same technique as drawing a box with the zoom tool). Any occurrence that the box touches will be included; the box does not have to completely enclose the occurrence.

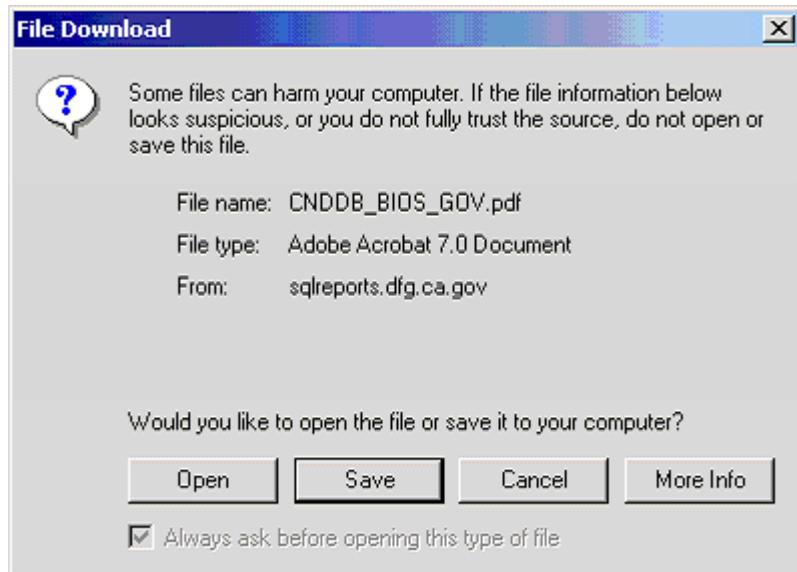
The screenshot displays a GIS interface for the California Department of Fish and Game's iMAPS Viewer. The map shows a coastal area with numerous species distribution layers highlighted in yellow. A black box labeled '19' indicates the use of the "Graphically select features from the active layer" tool. The legend on the left lists various data layers, including California Natural Diversity Database, California Natural Diversity Database - Invasive, California Natural Diversity Database - Terrestrial, and California Natural Diversity Database by Quadrant. The table at the bottom shows selected records from the California Natural Diversity Database - Government, with 23 records selected. The table includes columns for SCIENTIFIC\_NAME, COMMON\_NAME, ELEMENT\_CODE, DCC\_NUMBER, MAVERICK, LOMIS, KEY\_GNVEL\_CODE, KEY\_GNVL\_NAME, KEY\_CDMTE\_CODE, ACCURACY, PRECISION, and OCCL.

ZOOM	SCIENTIFIC_NAME	COMMON_NAME	ELEMENT_CODE	DCC_NUMBER	MAVERICK	LOMIS	KEY_GNVEL_CODE	KEY_GNVL_NAME	KEY_CDMTE_CODE	ACCURACY	PRECISION	OCCL
1	Lindernia occidentalis	California lindernia	ICBPA0618	212	48496	3812148	SAXON	VOL	specific weak	Presumed valid	B	
2	Athene cunicularia	Least nighthawk	JABR013018	499	48141	3812148	SAXON	VOL	non-specific weak	Presumed valid	C	
3	Antilocapra americanus	Pronghorn antelope	PERA02003	8	20151	3812148	SAXON	VOL	18.0m	Possibly Indicated	X	
4	Antilocapra americanus	Pronghorn antelope	PERA02001	31	24781	3812148	SAXON	VOL	18.0m	Possibly Indicated	X	

**Reports:** At this point, when you click on the “Increased functionality” tool (light bulb), the below window opens. From here you can choose to create reports from BIOS, or you can export this data set to RareFind. If you click on “#1: Occurrence by EONDX” (20), the following window will open.



You'll then get this File Download window. If you click “Open”, the PDF report is opened (see below). You can also save the reports to a file on your computer.



Adobe Reader - [CNDBIOS%SPFIDS%SFGOV(1).pdf]

File Edit View Document Tools Window Help

Save a Copy Search Zoom Report Generation Date: 03/06/2006

Paper

**CNDB BIOS**

California Department of Fish and Game  
California Natural Diversity Database

Map Index: 24741 ID Index: T764  
Keycode: 361246 (Saxon) Element Code: POFABDFR1  
Occurrences Number: 31

Scientific Name: Astragalus albus var. tenuif. Common Name: alkali milk-vetch  
Using Status: Global: None Other List: CNPS Unit: 18  
State: None REDCode: 323  
CNOB Element Ranks: Federal: G1T1 Audubon:  
State: G1.1 CEPRG:  
IUCN:  
Other:

General Habitat: Marsh habitat: ALKALI FLAYA, VALLEY AND FOOTHILL GRASSLAND, IN ANIMAL GRASSLAND OR IN PLAYAS OR VERNAL POOLS, IN VERNAL POOLS.

Last Date Observed: 12/15/2006 Last Survey Date: 2003-05-16  
Owner Manager: UNKNOWN Occurrence Type: Naturalistic occurrence  
Main Info Source: LISTON, A. 1969 (PERG) Trend: Unknown  
Provenance: Possibly Extinct Geo Rank: None  
Locality: 1/8 MILE SOUTH OF SAXON STATION  
Location Detail: MAPPED IN THE NE 1/4 OF THE NE 1/4 OF SECTION 17.  
Ecological Setting: GROWING IN A LARGER VERNAL MEADOW, ON SAPPHIRINE SOIL, FLOODED WITH LASTHERNA GLABRATA, DOWIA DORSIGERA, ALLOCARYA STIPITATA, BEESOUVIA GLUMETOGAMA, PSUDOCAPNUS BRICEGIGANTE, P. OBESISSIMA, MYOSURUS INVOLVULUS.  
Threats: HABITAT DEGRADED: MOSTLY OVERGRANIZED COW PASTURE.  
General: ONLY SOURCE OF INFO IS COLLECTION BY GRAMPTON IN 1978 (H9579). WITHIN VISITED SITE IN MAR & APR 2002, DID NOT SEE PLANTS BUT BELIEVES SITE IS EXISTANT. BITTMAN VISITED SITE 5/16/02, BUT NO PLANTS FOUND. WITHIN WILL REVISIT IN 2005.

Meridian: M Township / R: 36N / R: 14E Accuracy: 1/8 mile UTM: Zone 10 N 4257054 / E 217391  
Section/Quarter: 17NE Area (Acres): 0 Latitude/Longitude: 38.45982 / -121.65795  
Elevation (ft): 15

County Name: Yolo Geod Summary: Source Codes:  
Yolo (361246) Saxon BFT20202  
CRA78301  
LIS95P01  
WTF20201

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This report option is still under development. We will be making improvements to it, and eventually adding other report formats.

**Export BIOS Selection to RareFind:** Another report option is to export your selected occurrences to RareFind (21) and use RareFind as the report writer since RareFind has more report options.

California Natural Diversity Database - Microsoft Internet ...

California Natural Diversity Database  
Special Report Tool

California Natural Diversity Database - Government

Reports Available:  
**Report is currently BETA - may not work for large selections (>200).**

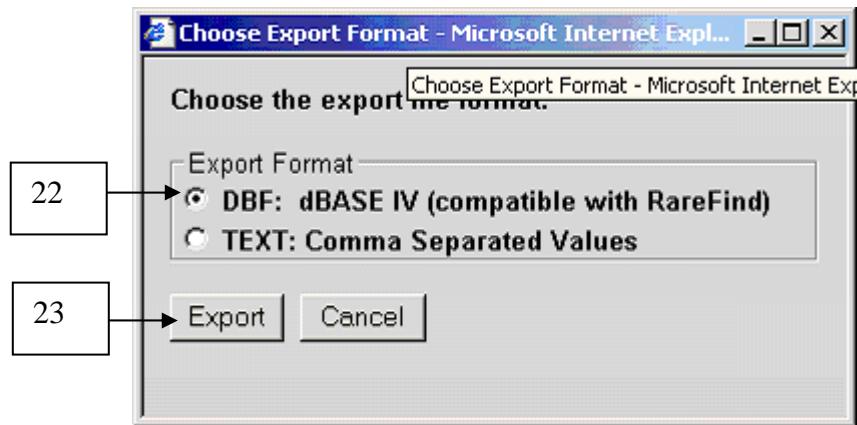
#1: Occurrence by EONDX

RareFind Tools:

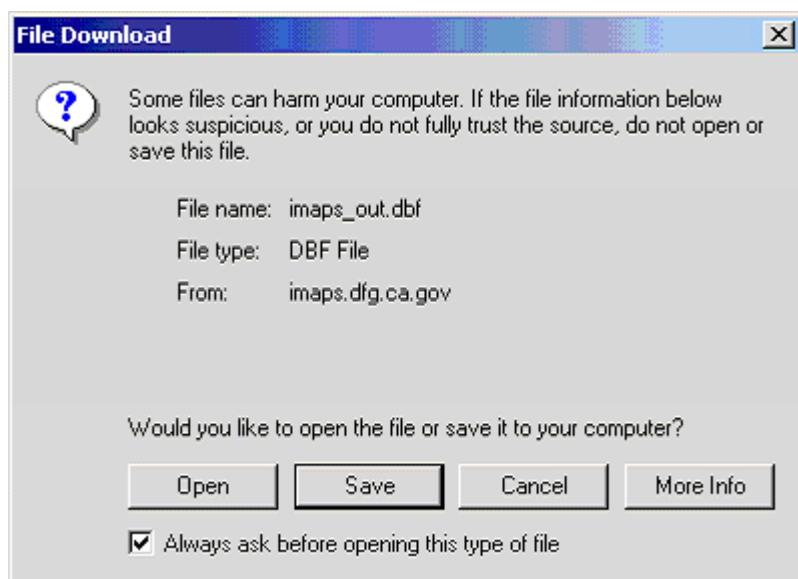
21 → Export Selected Attributes to RareFind

Upload RareFind Selection File (DBF) - 1000 Occurrences Max  
Browse... Upload Close

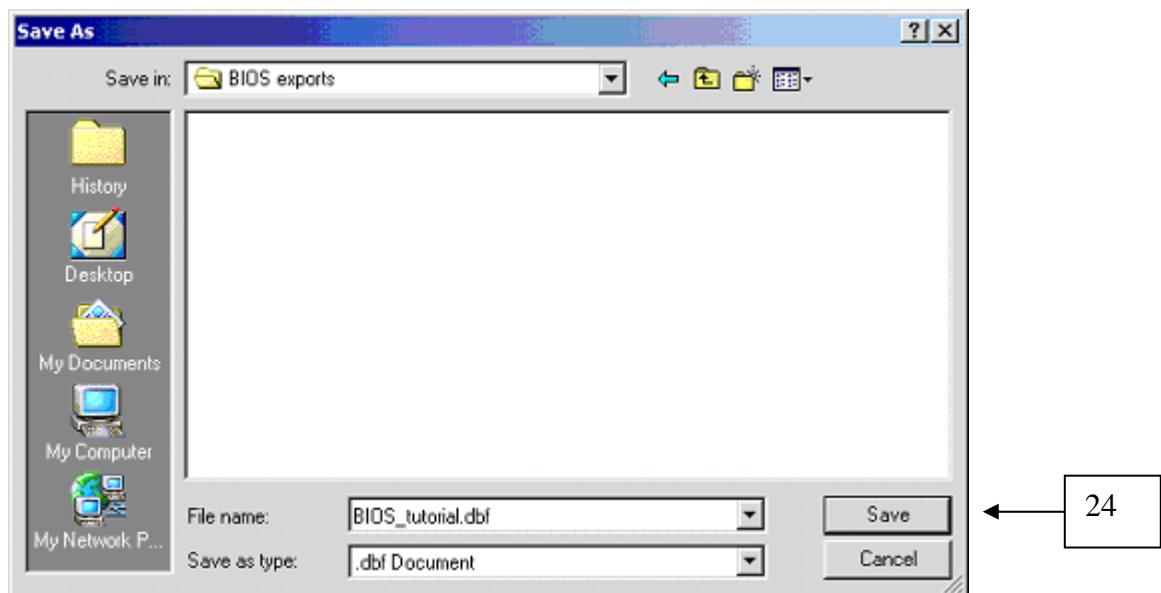
The default export option of DBF (22) is the correct one; click “Export” (23).



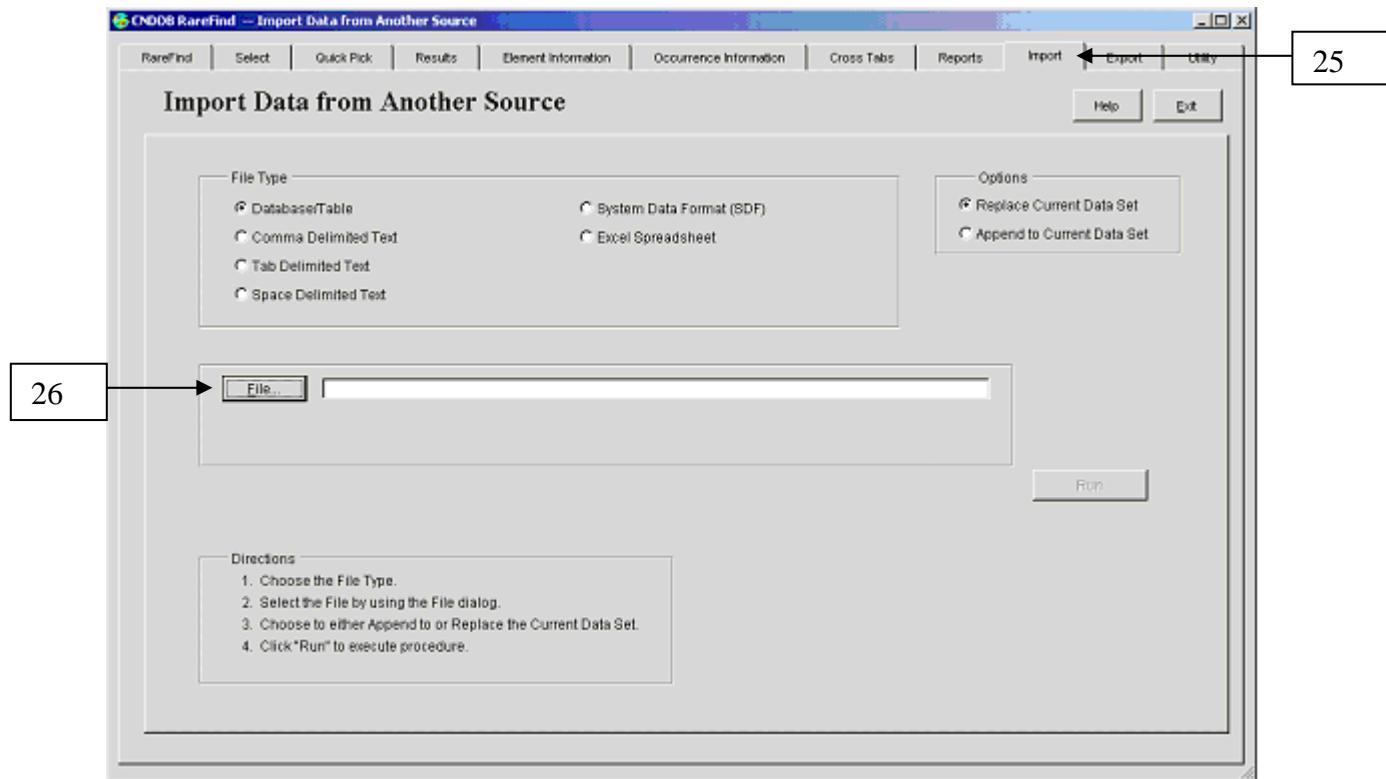
Next click “Save”. If you click “Open” it will open the .DBF file in an Excel spreadsheet.



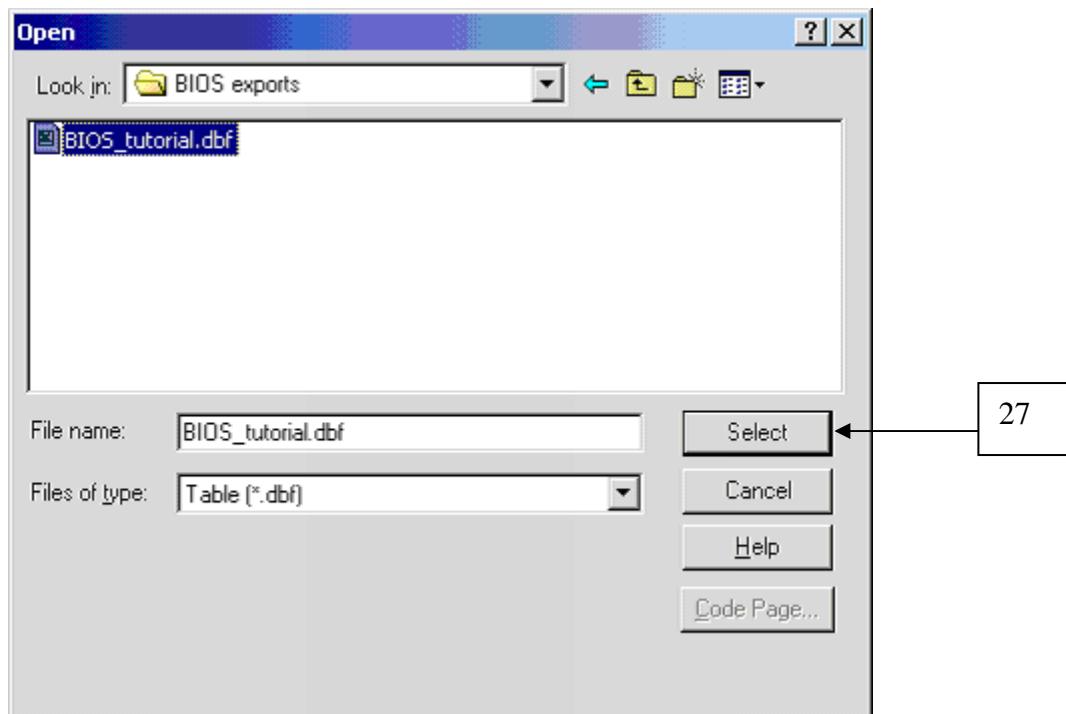
I have created a new folder on my “C” drive just for BIOS exports. Name your selection and click “Save” (24)



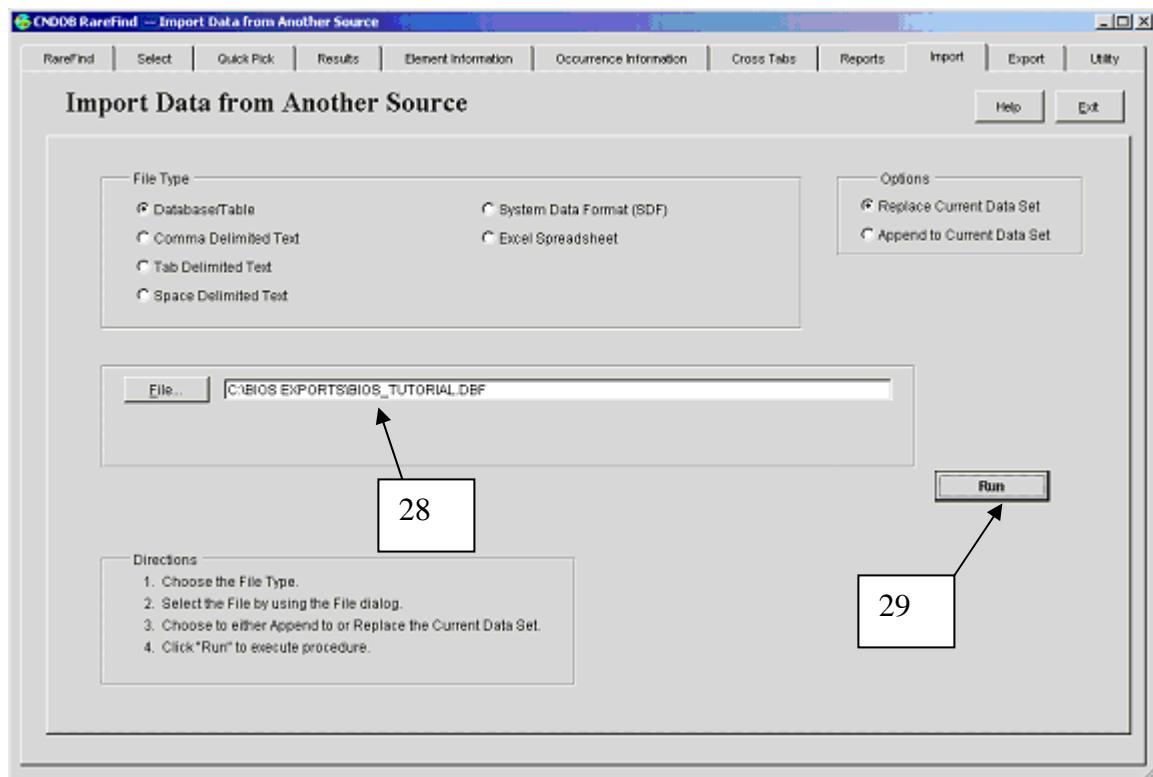
Next, open the RareFind program. Click the “Import” tab (25). Click the “File...” button (26).



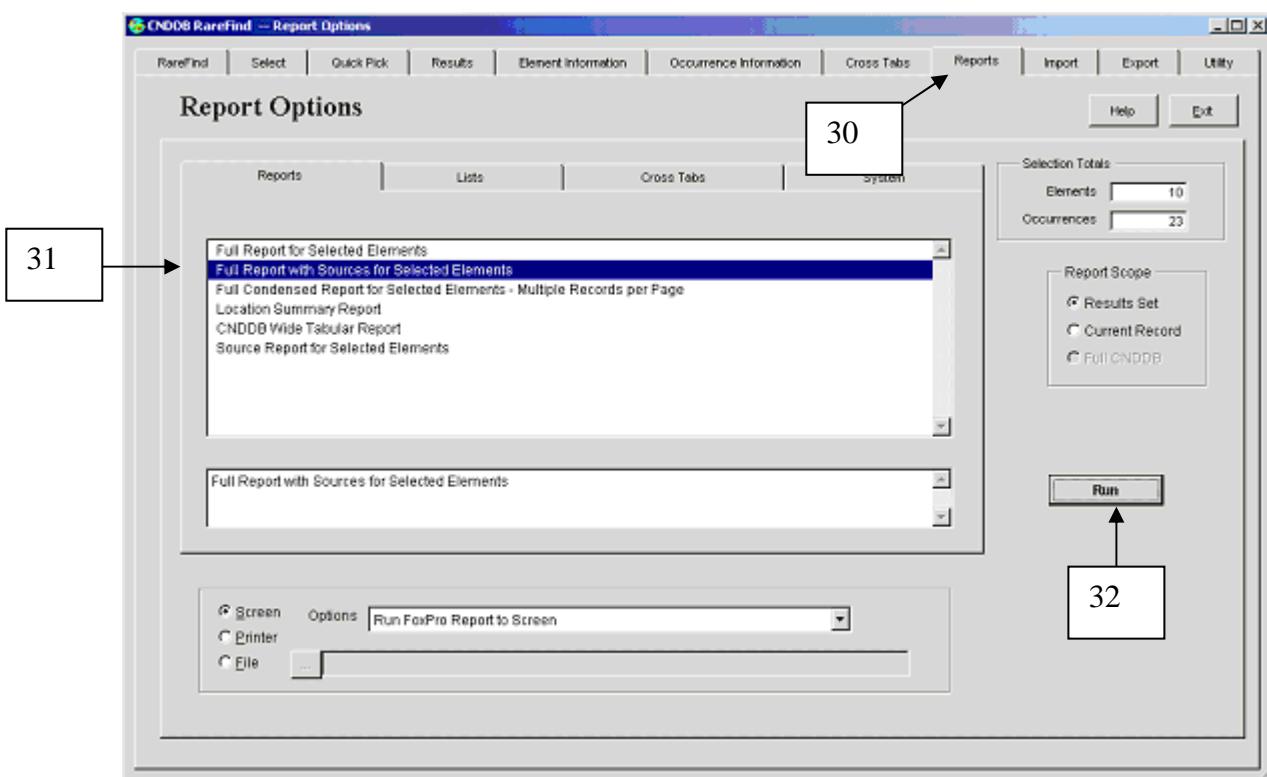
Navigate to the folder for BIOS exports. Select the file you want and click “Select” (27).



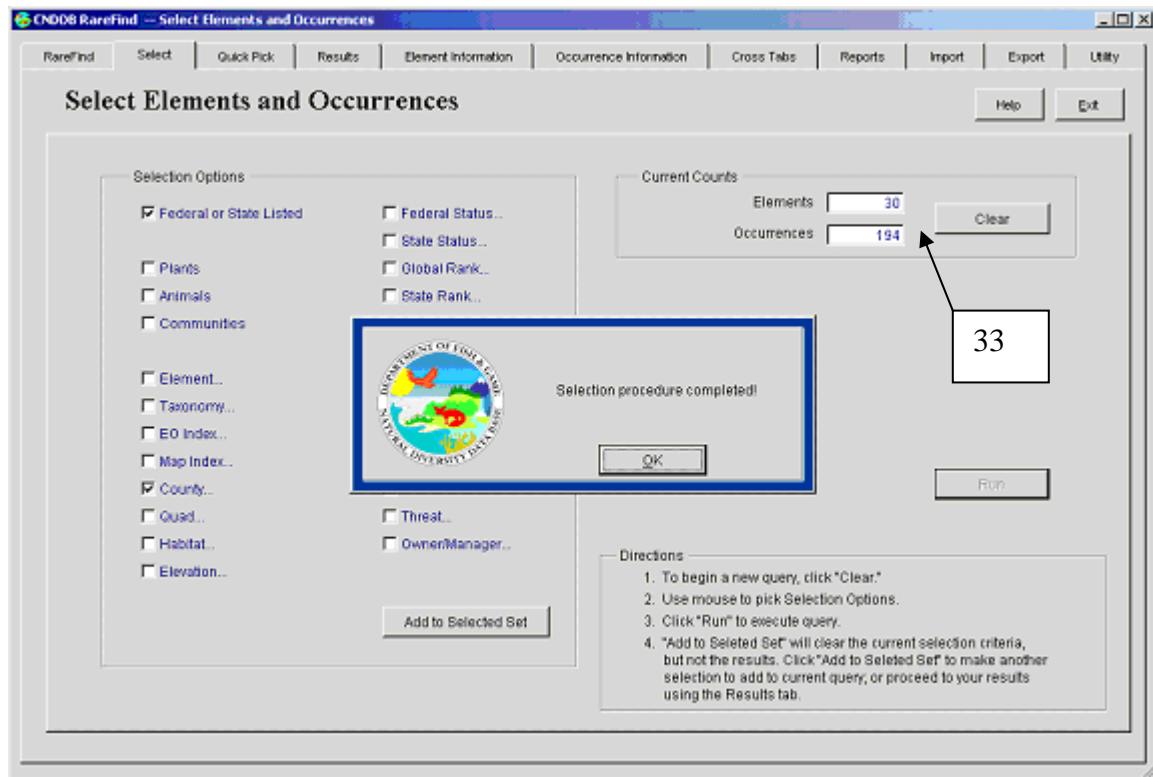
Be sure the correct file is shown in the “File...” window (28). Click “Run” (29). You will get a message when the selection procedure is completed. From this point, the usual RareFind report options are available.



Click on the “Reports” tab (30), click on a report option (31), then click “Run” (32).

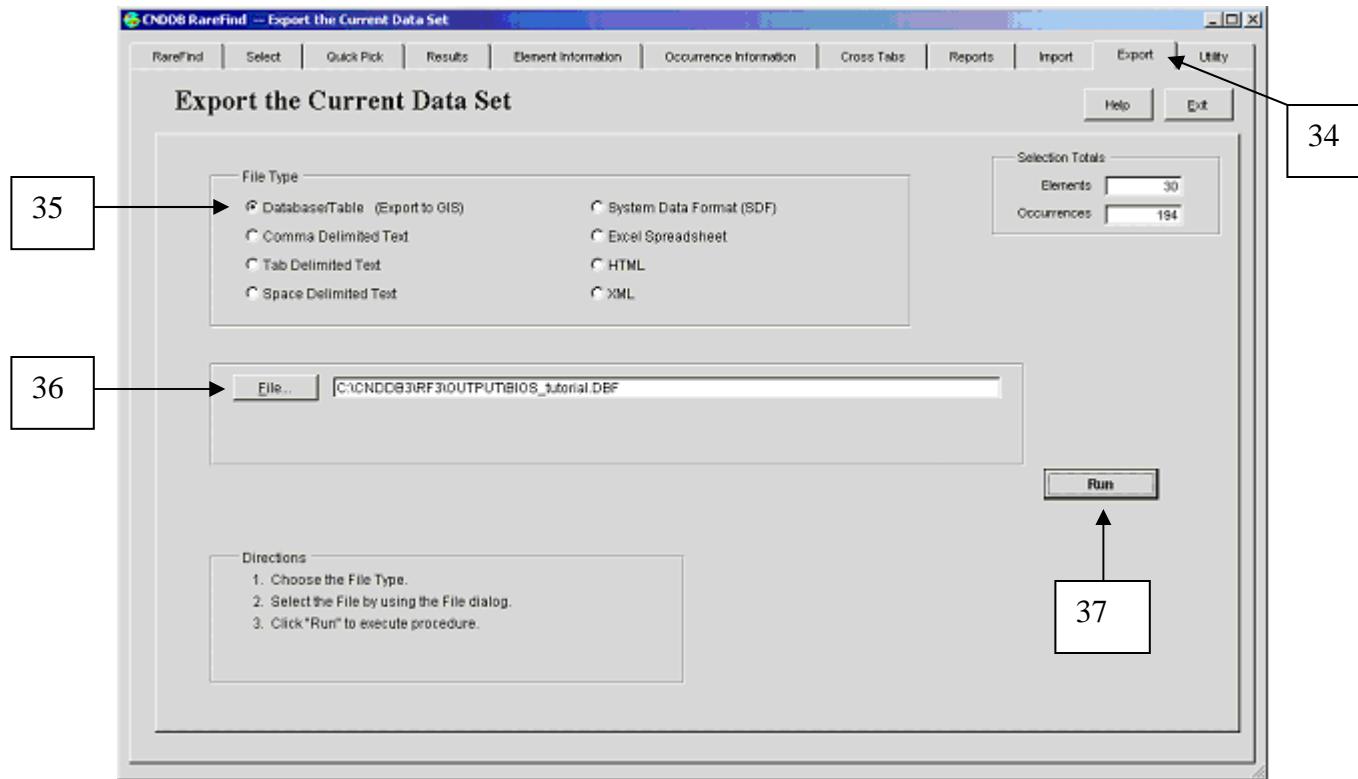


**Export RareFind Selection to BIOS:** So far we have shown how to make selections using the CNDDB application in the BIOS viewer and then export the result to RareFind. You can also make a selection in RareFind (RareFind has more extensive selection tools than BIOS, specific to the CNDDB) and export the result to the BIOS viewer to view on a map. The map can then be printed, emailed or saved to a file.

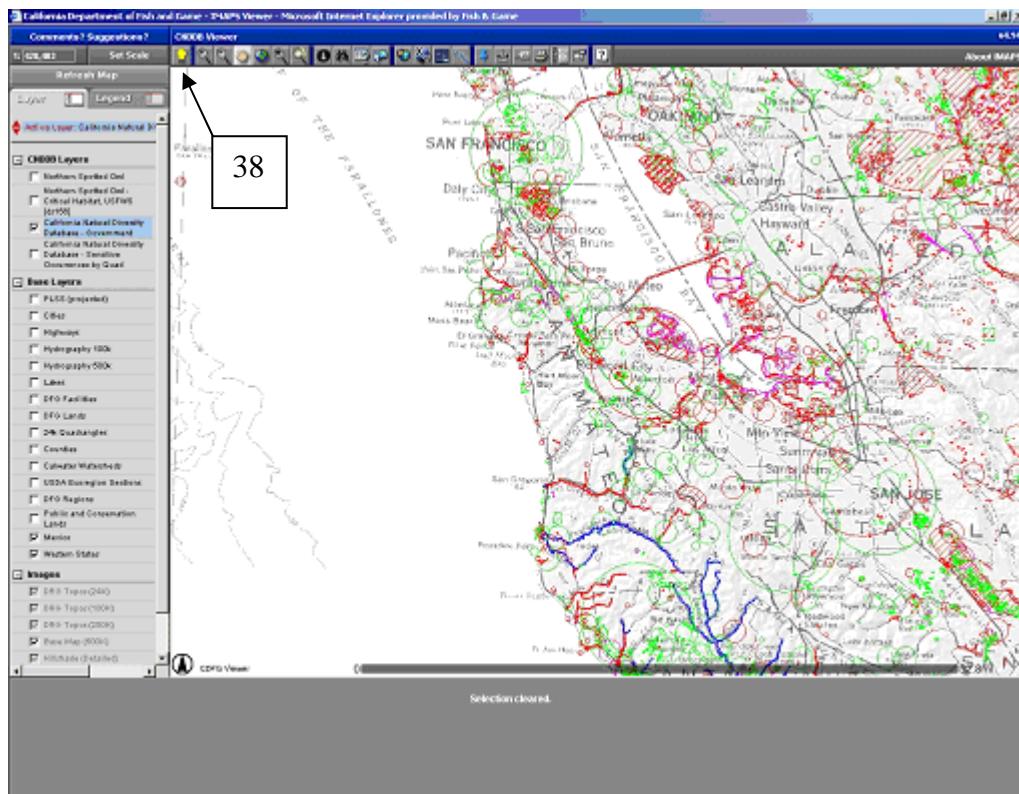


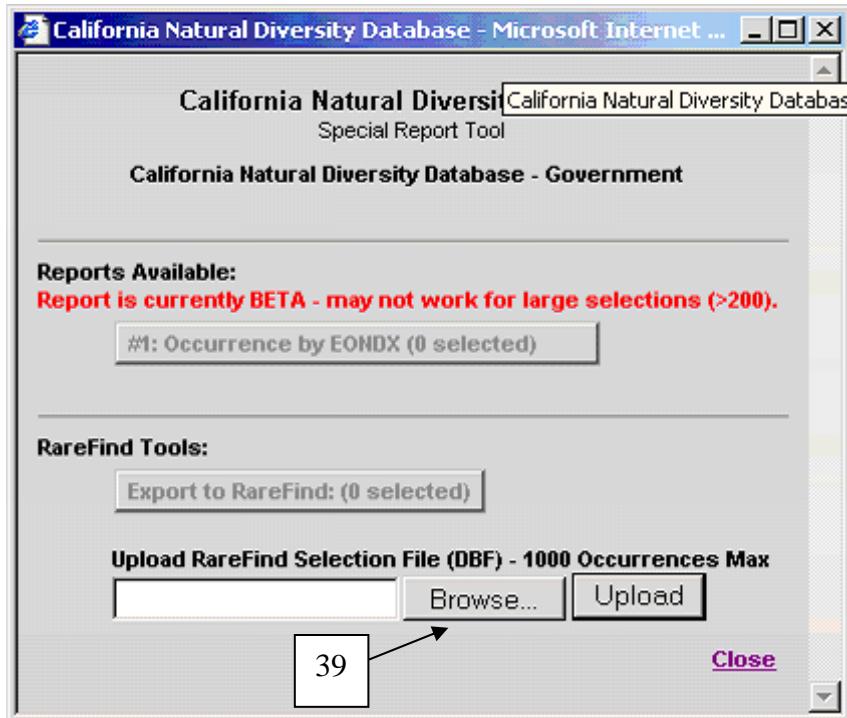
I have made a selection in RareFind for all Federal or State listed species in San Mateo County. RareFind found 30 elements and 194 occurrences (33) (Feb 2006 RareFind).

Now click on the “Export” tab (34). The default file type of “Database Table (Export to GIS)” is the option you want (35). Click on the “File...” button (36). The default path for exports from RareFind is shown in the window. The default name for the selected set is always “Export.DBF”; Rename your selection. I renamed this selection “BIOS\_tutorial.DBF”. Click “Run” (37)

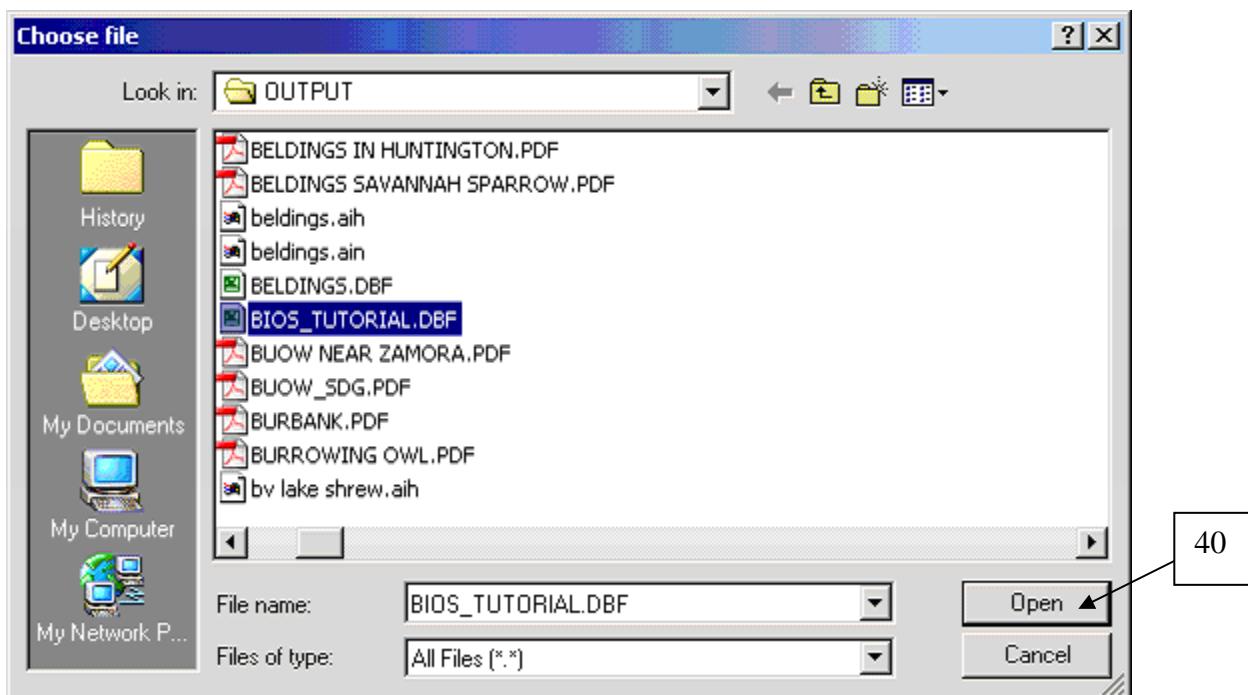


Now go to BIOS and click on the “Extended functionality” tool (light bulb) (38).

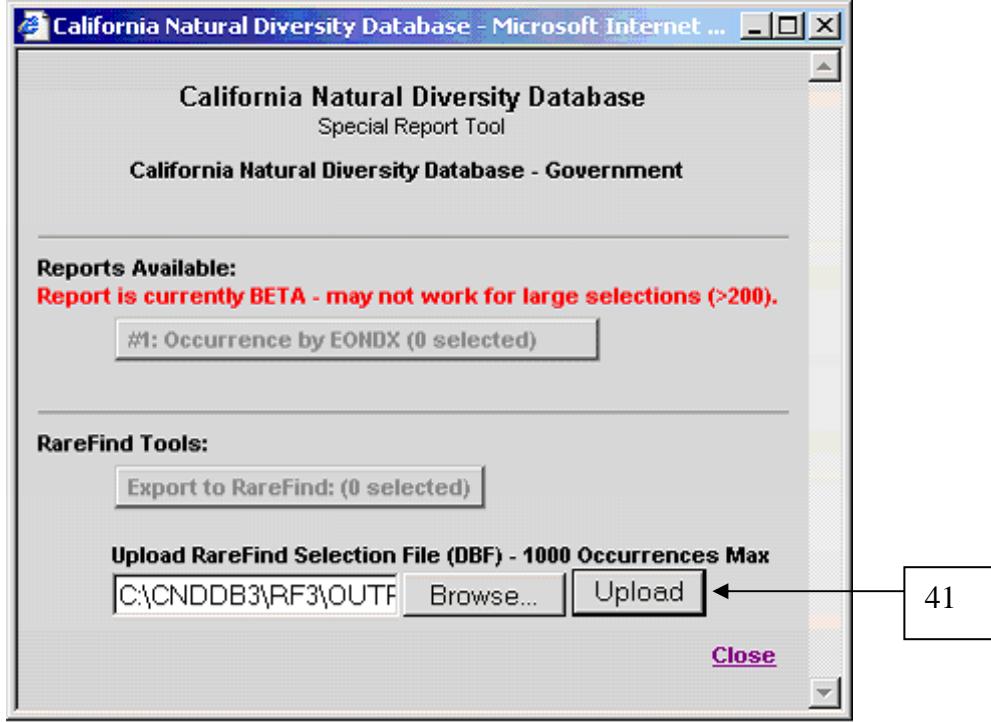




Click on “Browse” (39) and the following window opens:



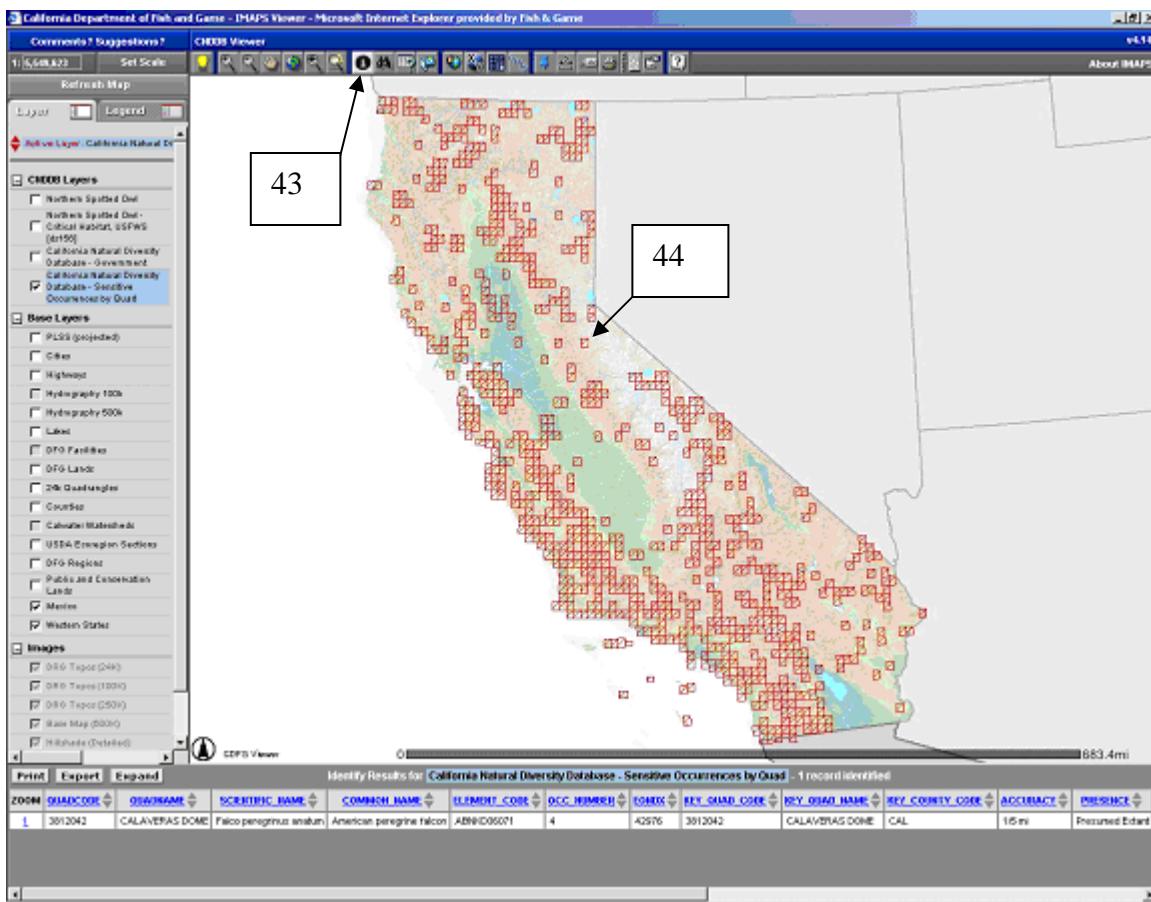
Select your file and click “Open” (40). The following window will open:



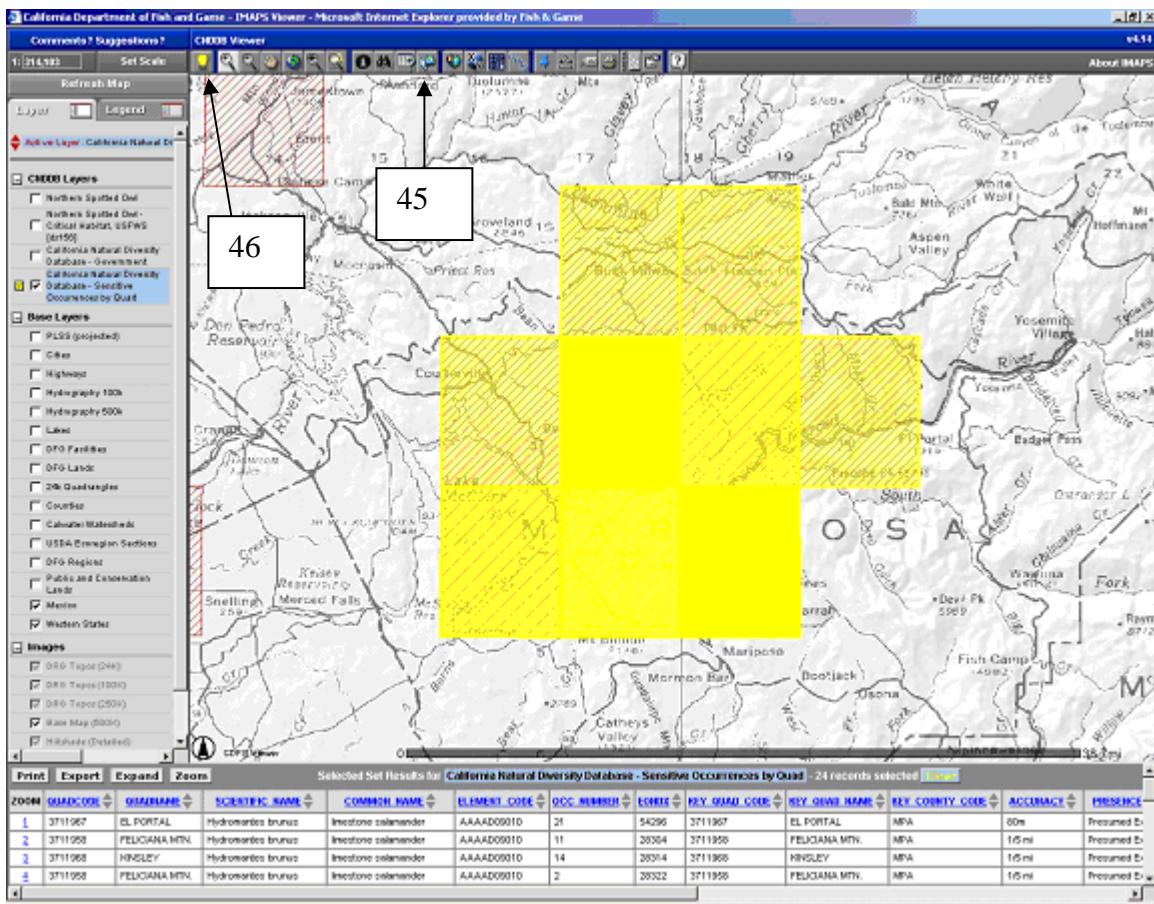
The whole path of the file you selected shows in the window. Click the “Upload” button (41).

ZONE	SCIENTIFIC NAME	COMMON NAME	ELEMENT_CODE	GSC_NUMBER	HABITAT	LON/LAT	KEY_GEOID_CODE	KEY_GEOID_NAME	KEY_COUNTRY_CODE	ACCURACY	PRESENCE
1	Layia carnosa	beach letisia	FOAST15N00	6	40400	36407	3712274	SAN FRANCISCO NORTH	SPO	5 mi	Estimated
2	Scudder's calippe callipe	calippe silverspot butterfly	IUBP3691	5	34152	14866	3712254	SAN FRANCISCO SOUTH	SMT	specific area	Presumed Extant
3	Thamnophis sirtalis tigris	San Francisco garter snake	ANADB36138	9	69568	27938	3712254	SAN FRANCISCO SOUTH	SMT	1/5 mi	Presumed Extant
4	Charadrius alexandrinus nivosus	western snowy plover	ASMBD00031	68	69304	24363	3712223	FRANKLIN POINT	SMT	1/5 mi	Estimated

The table at the bottom of the screen gives some text information for the selected occurrences. The map zooms to the correct area and shows the selected occurrences in yellow. You can print this map by clicking on the print tool (42). You will be prompted to set the printer to “landscape”, and you will have the opportunity to give the map a title. The map can be saved, emailed, or printed.



There are two versions of RareFind. A government version with all of the information contained in the CNDB, and a commercial version with the exact locations of some sensitive records suppressed. The fourth layer in the CNDB / Spotted Owl Viewer (CNDB - Sensitive Occurrences by Quad) shows all of the USGS topographic quad maps that contain suppressed records. You can use the “Identify” tool (43) to generate a list of the sensitive occurrences on that quad. In this example the quad was Calaveras Dome (44). Note: this layer must be made the Active Layer in order for the tools to work.



You can also use the “Graphically select features from the active layer” tool (45) to select one or more quads. The density of the yellow highlight is an indication of the number of sensitive occurrences on that quad. If you click on the “Extended functionality” tool (46) the following window will open:

**California Natural Diversity Database - Microsoft Internet ...**

**California Natural Diversity Database**

Special Report Tool

**California Natural Diversity Database - Sensitive Occurrences by Quad**

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**Reports Available:**  
Report is currently BETA - may not work for large selections (>200).

**#1: Occurrence by EONDX**

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**RareFind Tools:**

**Export Selected Attributes to RareFind**

**Upload RareFind Selection File (DBF) - 1000 Occurrences Max**

**Browse...** **Upload**

**Close**

Click on “#1: Occurrence by EONDX” to generate BIOS text reports:

Adobe Reader - [CNDBIOS%SPBIDS%SRCOM[1].pdf]

File Edit View Document Tools Window Help

Save a Copy Search Select 50% Help

Paper Report Generation Date: 02/09/2006

**CNDB BIOS**

California Department of Fish and Game  
California Natural Diversity Database

Map Index: 3711050 (Feliciana Mtn.) EO Index: 28922  
Keycode: Occurrence Number: 2 Element Code: AAAAD09010

Scientific Name: *Hydromantes brunus* Common Name: Limestone salamander

Listing Status: Global: None Other Lists: CHPN List:  
State: Threatened REDCode:  
Audubon:  
CHDDB Element Rank: Federal: G1 CDFG:  
State: S1 FCRW: Y  
Other: Y

General Habitat: Microhabitat:  
LIMESTONE OUTCROPS IN DODGE PINES-CHAMARIL CALIF BECKEYS AN INDICATOR OF OPTIMAL HABITAT.  
BELT ALONG THE MEREDITH RIVER AND ITS TRIBUTARIES,  
FROM 800-2600 FEET IN ELEV.

Occurrence Type: habitat/occurrence

Last Survey Date: 2000-03-20 Trend: Unknown

Owner/Manager: GORMAN, J. (MUS) Doc Rank: Unknown

Main Info Source: Presumed Extant

Location: \*SENSITIVE\* Location information suppressed.

Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information. (916) 324-3812.

Ecological: HABITAT CONSISTS OF LIMESTONE OUTCROPS ON A NE SLOPE, IN THE UPPER SONORAN LIFE ZONE, DOMINATED BY FOOTHILL PINE, TOUGH CHAMISE, BUCK BRUSH, YERBA SANTA, PHACELIA SP, AND CALIFORNIA WOOD FERN.

Threat: THREATENED BY OVER-COLLECTION.

General:

Meridian: UTM: Zone J/N/E  
Elevation/Depth: T/R Accuracy: Latitudinal/Longitude: /  
Section/Quarter: / Area (acres): Deviation (feet):

Source Codes:  
BR005001  
CA004001  
OR054001  
MT26001

Comments Attachments

1 of 23

Report Designer - fullreportsr.lrx - Page 3 - Press Esc to Close

California Department of Fish and Game  
Natural Diversity Database  
Full Report with Sources for Selected sensitive Elements

***Hydromantes brunus***  
Limestone salamander

Status	HDDB Element Ranks	Element Code
Federal: None	Global: G1	Other Lists
State: Threatened	State: S1	CDFG Status

**Habitat Associations**

**General:** LIMESTONE OUTCROPS IN DIGGER PINE-CHAPARRAL BELT ALONG THE MERCED RIVER AND ITS TRIBUTARIES, FROM 800-2500 FEET IN ELEV.

**Micra:** CALIF BUCKEYE AN INDICATOR OF OPTIMAL HABITAT. SEEKS COVER IN LIMESTONE CAVERNS, TALUS, ROCK FISSURES, SURFACE OBJECTS.

\* SENSITIVE \*

Occurrence No.	Map Index:	EO Index:	Dates Last Seen
Occ Rank:	Unknown		Element: 2000-02-20
Origin:	Natural Native occurrence		Site: 2000-02-20
Presence:	Presumed Extant		
Trend:	Unknown		
Main Source:	GORMAN, J. 1952 (MUS)		Record Last Updated: 2006-01-24
Quad Summary:	FELICIANA MTN. (0711958438C)		
County Summary:	MARIPOSA		

\* SENSITIVE \*

Lat/Long:	37.61170° N / -119.95728° W	Township:	04S
UTM:	Zone-11 N4166848 E238965	Range:	18E
Mapping Precision:	NON-SPECIFIC	Section:	02 0th SW
Symbol Type:	POINT	Meridians:	M
Radius:	1.5 mile	Elevations:	1,280 ft

**Location:** EAST SIDE OF HIGHWAY 140, ABOUT 0.6 TO 0.7 MILE NNE BRICEBURG

**Location Detail:** TYPE LOCALITY. SITE MEASURES 100 X 1200 YARDS, AT 1285-2500 ELEVATION. TYPE COLLECTED UNDER SMALL ROCK, AT BASE OF LOW CLIFFS ALONG HIGHWAY 140; PARATYPE WAS COLLECTED UNDER MOSS-COVERED ROCK ON HILLSIDE UP SLOPE FROM TYPE SPECIMEN.

**Ecological:** HABITAT CONSISTS OF LIMESTONE OUTCROPS ON A NE SLOPE, IN THE UPPER SONORAN LIFE ZONE, DOMINATED BY FOOTHILL PINE, TOYON, CHAMISE, BUCK BRUSH, YERBA SANTA, PHACELIA SP., AND CALIFORNIA WOOD FERN.

**Threat:** THREATENED BY OVER-COLLECTION

**General:** TYPE (204952), MVZ069530. PARATYPE (227152). #56909, #56929-38, 39640-57, 62485-91, 67354, 67357-8 & 67562 (1952-7). CAS#94968-70 (252). MVZ #163715-6 (58). #222304 (59). #179389-62 (62). #202305-9 (66). #235640-1 (200/2000).

**Owner/Manager:** UNKNOWN

**Sources**

- BRO00U01 BRODE, JOHN. GEOGRAPHIC REFERENCE CARD CATALOG, 1980. RECORDS OF SPECIMEN LABELS COLLECTED BY BRODE, 1980-XX-XX.
- CAG04501 CALIFORNIA ACADEMY OF SCIENCES. CAS HERPETOLOGY HOLDINGS (INCLUDES STANFORD UNIV. COLLECTIONS) FOR HYDROMANTES BRUNUS. 2004-01-05.
- GORM4401 GORMAN, J. A NEW SPECIES OF SALAMANDER FROM CENTRAL CALIFORNIA. HERPETOLOGICA 10:153-158. 1954-XX-XX.
- MVZ06501 MUSEUM OF VERTEBRATE ZOOLOGY. PRINT-OUT OF MVZ SPECIMEN RECORDS FOR HYDROMANTES BRUNUS. 2006-01-24.

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If you click on the "Export Selected Attributes to RareFind" option and you have the government version of RareFind, you will see the complete report. Note, that the report is marked "sensitive" (47).